

REMARKS

By this Amendment, claims 1-14 have been amended to merely clarify the recited subject matter. Claims 1-14 are pending.

As a preliminary matter, Applicants note that originally filed claim 14 already depends from claim 5. Therefore, no claim amendment is required and the objections should be withdrawn. Additionally, although Applicants note the indication of claims 2, 11 and 12 as containing allowable subject matter, Applicants delay rewriting those claims in independent format at this time to afford the Office the opportunity to fully reconsider the patentability of the rejected based claims.

Claims 6 and 8-12 were rejected under 35 U.S.C. 112, second paragraph, for indefiniteness. Applicants have amended those claims and submit that those amended claims fully conform to 35 U.S.C. 112, second paragraph. Accordingly, the rejection should be withdrawn.

Claims 1, 3, 5-8, 10 and 13 were rejected under 35 U.S.C. 102(e) as being anticipated by Swisher (U.S. 6,385,253), claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Swisher and Furukawa (EP 1024648) and claims 9 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Swisher and Shenoi (U.S. 6,829,292). Applicants traverse the prior art rejections because the cited references, analyzed individually or in combination, fail to disclose, teach or suggest the features recited in the rejected claims.

For example, the cited prior art fails to disclose, teach or suggest the claimed method for conveying information between a data network and a subscriber's transceiver unit, the method comprising "using at least one Very-high-data-rate Digital Subscriber Line, VDSL, downlink frequency band to convey information from the data network to the subscriber's transceiver unit; and using at least one non-VDSL uplink frequency band to convey information from the subscriber's transceiver unit to the data network" as recited in independent claim 1 and its dependent claims. Similarly, the cited prior art fails to disclose, teach or suggest a transceiver unit for Very-high-data-rate Digital Subscriber Line, VDSL, communication to/from a data network the transceiver unit comprising "downlink filter means for conveying information from the data network to the subscriber's transceiver unit using at least one Very-high-data-rate Digital Subscriber Line, or VDSL, downlink frequency band; and uplink filter means for conveying information from the subscriber's transceiver

unit to the data network using at least one non-VDSL uplink frequency band,” as recited in independent claim 5 and its dependent claims.

To the contrary, Swisher merely teaches reception of a (VDSL) signal from a twisted wire pair drop cable, wherein an amplification circuit provides gain in the high end of the VDSL band to compensate for higher losses on twisted wire pair at those frequencies. The additional amplification is realized through the use of a resonator circuit, which can be switched in and out of a gain block using a field effect transistor. A determination is made whether to “switch in” the resonator circuit based on the measured, total power received and a conclusion that the received power at higher frequencies is severely attenuated.

Swisher’s FIG. 2 illustrates a VDSL spectral allocation for a twisted wire pair spectrum that is divided into sub-bands with each sub-band carrying a particular service. The lower band 200 is reserved for the Plain Old Telephone Service (POTS) and occupies the spectrum from 0 to 3 kHz; the POTS spectrum is an Integrated Services Digital Network (ISDN) band 210, which can provide data services at a basic rate of 144 kbps. The upstream link 220 ranges from approximately 317 kHz to 965 kHz centered at 641.25 kHz. The symbol rate in the upstream link 220 is fixed at 540 kbaud with three possible bit rates of 1.08 Mbps, 2.16 Mbps and 3.24 Mbps using QPSK, 16-QAM and 64-QAM modulation, respectively. The downstream link 230 ranges from approximately 1.5 MHz to 9.3 MHz allowing bit rates from 9.72 Mbps to 25.92 Mbps.

However, the frequency plan incorporated by Swisher’s invention is not standard VDSL. Moreover, Swisher does not teach or suggest that POTS and ISDN frequencies would be used as a part of VDSL. In fact, Swisher fails to teach or suggest using the POTS or ISDN frequencies at all. Rather, the only reference to those frequency ranges is made in passing with reference to FIGS. 2 and 3 without any direction to utilize those frequencies for any specified purpose.

Rather, Swisher actually incorporates fixed frequencies, only having one frequency/direction. Thus, when read in its entirety, it is clear that Swisher does not advocate the use of multiple frequency bands; rather, Swisher uses only one band, which is widened depending on the transmission line length being used.

Therefore, Swisher fails to disclose, teach or suggest, the claimed invention which uses downlink filter means to convey information from the data network to the subscriber’s transceiver unit, using at least one VDSL downlink frequency band, and uses uplink filter

means for conveying information from the subscriber's transceiver unit to the data network, using at least one non-VDSL uplink frequency band.

Furukawa fails to remedy the deficiencies of Swisher because Furukawa merely teaches conventional processes associated with initialization procedures for a VDSL transceiver. However, Furukawa fails to teach or suggest using downlink filter means to convey information from the data network to the subscriber's transceiver unit, using at least one VDSL downlink frequency band, and using uplink filter means for conveying information from the subscriber's transceiver unit to the data network, using at least one non-VDSL uplink frequency band. Therefore, the combined teachings of Swisher and Furukawa fail to disclose, teach or suggest the claimed invention recited in independent claims 1 and 5 and their respective dependent claims.

Similarly, Shenoï fails to remedy the deficiencies of Swisher and Furukawa because Shenoï merely teaches the use of frequency band-specific bandpass filters to improve transmission characteristics. However, Shenoï fails to teach or suggest using at least one VDSL downlink frequency band to convey information from a data network to a subscriber's transceiver unit, and using at least one non-VDSL uplink frequency band to convey information from the subscriber's transceiver unit to the data network.

Therefore, the combined teachings of all the prior art references fail to disclose, teach or suggest the claimed method for conveying information between a data network and a subscriber's transceiver unit, as recited in independent claim 1, and its dependent claims, or the claimed transceiver unit, recited in independent claim 5, and its dependent claims. Accordingly, claims 1-14 are allowable.

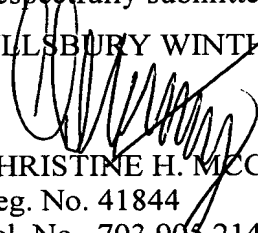
All rejections having been addressed, Applicants request issuance of a notice of allowance indicating the allowability of all pending claims. If anything further is necessary to place the application in condition for allowance, Applicants request that the Examiner contact Applicants' undersigned representative at the telephone number listed below.

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Respectfully submitted,

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